

EXPANSION OF THE POMERANIAN CULTURE IN POLAND DURING THE EARLY IRON AGE: REMARKS ON THE MECHANISM AND POSSIBLE CAUSES

ABSTRACT: First migratory explanations of characteristic manner of spreading of the Pomeranian culture remains in Polish lowland were expressed at the turn of the 19th and 20th century. Since then, they have been continuously supported by newer arguments, despite the fact that parallel strong anti-migrationist current was being developed. The author of the present study gathers arguments pro and contra migration, concluding that scenario assuming people movement (the extent of which is hard to evaluate) explains in the most complex way the phenomenon of so-called Pomeranian culture expansion. In the second part of the article, the author discusses possible conditions for occurring migration in studied case. Due to the revision of chronology of cultural and palaeoclimatic events, the role of climatic changes around the Sub-Boreal/Sub-Atlantic transition as a factor of presumed migration is proposed to be seriously limited. Eventually, an attempt is made to apply some elements of socio-cultural models of prehistoric migrations to the Pomeranian culture case study.

STRESZCZENIE: Wykorzystanie teorii migracyjnych dla wyjaśnienia charakterystycznego rozprzestrzenienia stanowisk kultury pomorskiej na niżu polskim po raz pierwszy zaproponowano na przełomie XIX i XX w. Od tego czasu teorie te były sukcesywnie wspierane coraz nowszymi argumentami, mimo równoległego funkcjonowania odmiennego, antymigracyjnego trendu. Autor niniejszego szkicu zbiera argumenty za i przeciw migracji, dochodząc do wniosku, iż hipoteza, dopuszczająca przesunięcia ludnościowe najlepiej tłumaczy całokształt zjawisk związanych z tzw. ekspansją kultury pomorskiej. Skala tych ruchów jest jednak niezwykle trudna do oceny. W dalszej części artykułu autor rozważa możliwe uwarunkowania dla zaistnienia migracji w omawianym przypadku. Zestawiając najnowsze dane z zakresu paleoklimatologii ze zweryfikowaną chronologią wczesnej epoki żelaza, proponuje ograniczyć przypisywanie zmianom klimatycznym roli czynnika sprawczego domniemanej migracji. Ponadto podejmuje próbę zaaplikowania w omawianym przykładzie elementów społeczno-kulturowych teorii migracji.

KEYWORDS: Early Iron Age Poland, Pomeranian culture, expansion of culture, migration, Sub-Boreal/Sub-Atlantic transition

INTRODUCTION

In the twentieth century, succeeding schools of archaeological thought took different positions with regard to migration. It depended mostly on current paradigms as well as socio-political trends (Chapman 1997; Härke 1998). Independently of those “fashions”, migration as explanatory model still played a significant role in the culture-historical (traditional) school. Migratory explanations were presented in almost all handbooks of European prehistory. One of the examples was an application of the vision (it is hard to call it a model) of development and expansion of societies inhabiting Polish Pomerania in the Early Iron Age. Since the first theories involving migration were expressed at the turn of 19th and 20th century (e.g. Kossinna 1917: 125-126; Kostrzewski 1923: 120, 133; Tackenberg 1926: 154-155; Petersen 1929: 126; see also: van den Boom 1980/1981: 225-232), they have been continuously supported by newer arguments (e.g. Łuka 1979; Podgórski 1992; Czopek 1992; Gedl 1995), despite the fact that opposite approach was being developed by some prominent scholars (e.g. Hensel 1958: 85-86; 1969; 1971: 68-75; 1988: 367; Malinowski 1963; 1989a). The present study aims to gather the arguments to the advantage and disadvantage of migration (derived from both, archaeology and palaeoecology) and reconsider them in a broader socio-cultural framework.

THE POMERANIAN CULTURE CASE – GENERAL INFORMATION

Migratory explanation was employed with regards to distribution of the Pomeranian culture due to a specific manner of its spreading. The oldest sites (from 9th-8th century BC) were located exclusively in Pomerania, whilst the younger ones (5th-3rd century BC) were encountered far beyond this region, in Greater Poland, Silesia, central Poland, and southern and south-eastern Poland (Fig. 1). During the youngest phase of its development, hardly any traits of the culture in question existed in the area of Pomerania. The oldest phase was strongly connected with the Late Bronze local branch of the Urnfield culture (Kashubian group of the Lusatian culture). Beginnings of cultural transformation can be dated to the 9th century BC, when the transitory phase (Wielka Wieś-phase) could be distinguished. Its dating to the end of the Late Bronze Age (Montelius Per. V) is indicated, for example, by the occurrence of pins with small, vase-like heads. However, the most distinctive cultural features appear in the 8th-7th century, which should be related to the beginnings of the Hallstatt C period (Podgórski 1992). One of these features is the occurrence of so-called eye- and house urns (Malinowski 1995; Podgórski 1997; Sabatini 2007). The classical phase of the Pomeranian culture developed in the course of Hallstatt D, around the half of the 7th century. Among typical cultural elements, face urns and chest graves, encountered mostly in the northern part of the Pomeranian culture area, can be mentioned. Beside a certain number of elements specific to this culture, there occur interregional forms, such as the late Hallstatt brooches and bronze vessels. At the end of the Hallstatt D period, materials described as Pomeranian appear in vast areas

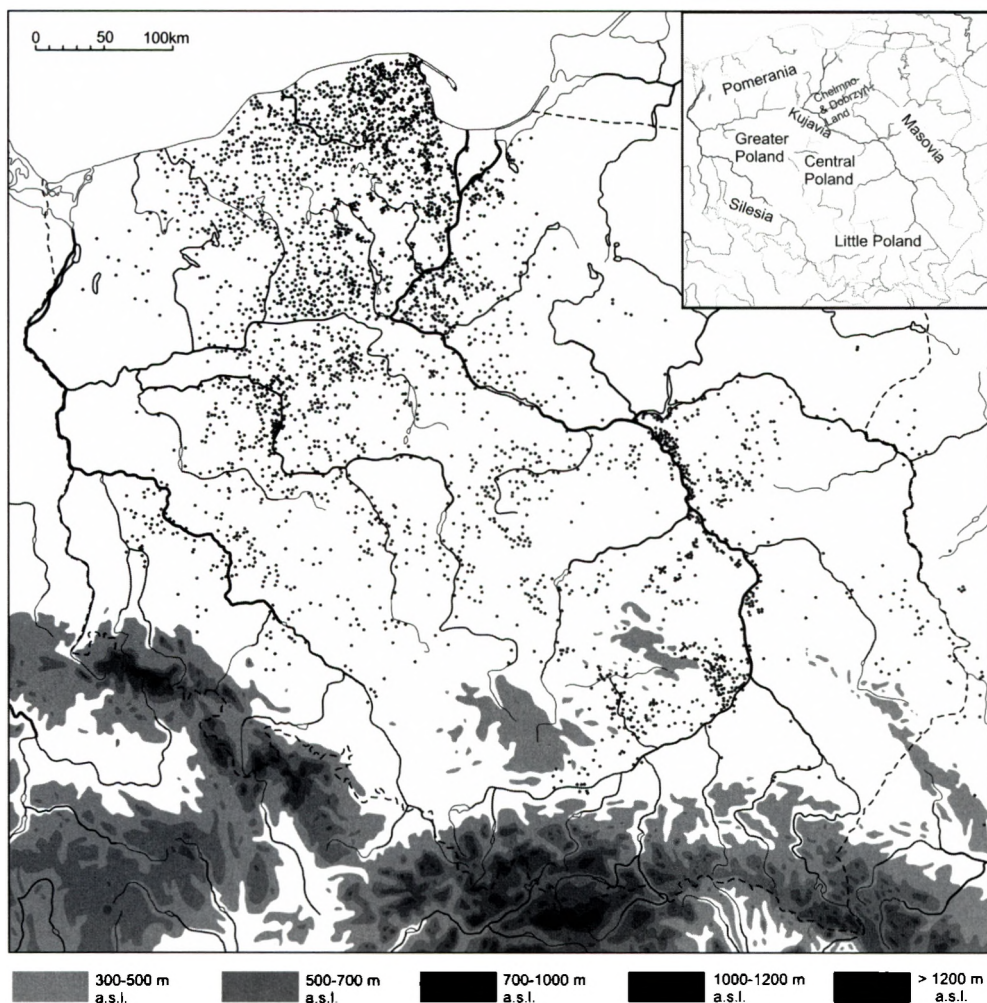


Fig. 1. Distribution of Pomeranian culture sites in Poland (all chronological stages). Map includes the so-called 'Cloche Graves' culture, but excludes several dozens of sites in Volhyn and Podolia. Sites known from surface surveys (Polish Archaeological Record) were only included for peripheries of the Pomeranian culture extent. One dot may represent several sites within the boundaries of one locality (especially in the territory of Pomerania)

of Polish lowland (Malinowski 1989a). A succeeding, younger phase is characterised by an occurrence of brooches and belt clasps of the early La Tène style. In funeral practices a form of so-called "cloche grave" is predominant. During the early La Tène period the materials ascribed to the culture in question appear in uplands of southern Poland, reaching the border of the Carpathian Foreland (Fig. 1). Simultaneously, in Pomerania and northern Greater Poland, gradual disappearing of the materials dated later than to the early La Tène period can be observed.

It was quite early when this specific spreading of material traits was noticed (for history of the research, see: van den Boom 1980/1981). Early attempts explained it with migration, which could be caused mainly by climate changes towards cooler and wetter conditions and by the resulting collapse of subsistence bases due to poor soil cover (Kostrzewski 1946: 28-29). The only argument employed in order to support this theory was the distribution of artefacts. At that time, migratory approach was closely linked with ethnic identification of the culture – for German and Polish pre-historians, materials in question were ascribed either to early Germans (Vandals or Bastarnae), Balts, or ancient Slavs (for references to the whole discussion see: van den Boom 1980/1981: 224-232). According to those approaches, southward expansion was of military nature and was believed to be one of the main causes for the decline of the Lusatian culture (cf. Malinowski 1989a).

Migratory model in explaining cultural changes in the Early Iron Age has never been totally abandoned in Polish literature, despite the fact that “official”, anti-migration current dominated from the 1960s to the 1980s (Hensel 1969; 1971; 1988; Malinowski 1963; 1989a). This theory described the discussed processes in terms of alterations in superstructure, which had had to occur among the communities of the Lusatian culture. It was rather a consequence of applying the Marxist theory, which perceived factors of cultural change in class conflict and changing of economic conditions, than joining a broader trend of “retreat from migrationism”, announced by the New Archaeology (Chapman, Hamerow 1997).

ARGUMENTS FROM POMERANIA

Trying to test a migratory explanation, I would like to propose a modification of the main question that has frequently been asked up to date. Therefore, I do not query whether the people, who left material remains described as ‘the Pomeranian culture’ on vast parts of Polish lowland outside Pomerania, were newcomers. I would rather ask what happened with the communities that inhabited Pomerania – presumed as the motherland of migrating people – and look closer into the rhythm of development of the Early Iron Age communities in this area.

Studies of artefacts regarded as precise dating markers play a crucial role in the discussion of dynamics of settlement atrophy in this area. The last period of the settlement in Pomerania clearly confirmed by the distribution of such artefacts is the end of the Hallstatt period, evidenced by the late Hallstatt brooches (especially of Wymysłowo-, Wojszyce- and Tłukomy types, see: Gedl 2004, Pl. 86-88) (Fig. 2:A). Afterwards, only few brooches and belt clasps made in the early La Tène (LT A) style are known from the entire region of northern Poland (Fig. 2:B). This fact was noticed for the first time by E. Petersen (1929: 126), but has been neglected for years since many authors claimed that in Pomerania, interregional forms were lacking due to some conservatism and the decline of interregional links typical of the Hallstatt period (e.g. Ostoja-Zagórski 1982: 127). Such a thesis is very unlikely, regarding the fact that contemporary sites of the Pomeranian culture in Greater Poland or Silesia have yielded many well dating artefacts (Fig. 2:B), which indicates that ‘Pomeranian’ societies took part in interregional

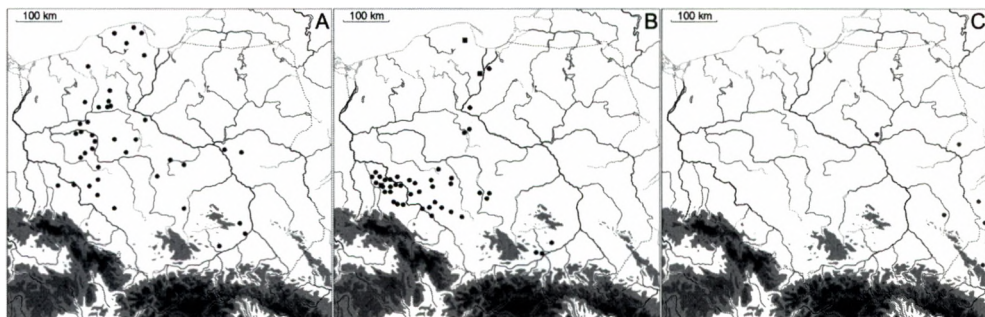


Fig. 2. Distribution of well-dated artefacts on Pomeranian culture sites: A – brooches of the late Hallstatt construction; B – brooches (dots) and belt clasps (rectangles) of the early La Tène style; C – brooches of the middle La Tène style (after Woźniak 1995; Gedl 2004; updated by the author)

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exchange networks at the beginning of the early La Tène period as well (Woźniak 1979; 1995; Wołagiewicz 1979; Podgórski 1992). There exists no evidence, in terms of well dated items, for inhabiting Pomerania in later phases of the La Tène period (LT B or C phases) (Fig. 2:C).

If a significant depopulation had taken place there, as suggested by the distribution of archaeological finds, one may expect that it would be recorded also in the pollen diagrams. Current state of palynological research entitles us to draw some conclusions about human settlement in Pomerania (Latałowa 1997; Nalepka 2004, Fig. 107). Many pollen spectra from Pomerania show significant increase of human impact indicators around the Sub-Boreal/Sub-Atlantic transition (Fig. 3: 1). Percentage values of human activity indicators are sometimes surprisingly high, exceeding in particular cases those from the Roman period (Fig. 3: 1) (especially: Latałowa 1982, Fig. 11; Bogaczewicz-Adamczak, Miotk-Szpiganowicz 1987; Berglund et al. 1990, Fig. 3; Miotk-Szpiganowicz 1992, Fig. 23, 24; Latałowa, Tobolski 1989). One should be cautious in attempting to determine a detailed chronology of this changes, since the quoted profiles are chiefly not of high-resolution type. Nonetheless, with the greatest probability, peaks of human activity recorded in the above-mentioned profiles should be attributed to the Lusatian/Pomeranian transitory phase (Wielka Wieś-phase) and/or the Pomeranian culture itself. Palaeobotanists connect these peaks with the entire Late Bronze and Early Iron Age sequence of cultural development of Pomerania (i.e. the Lusatian and Pomeranian cultures) (Latałowa 1997; 2007). In my opinion, the Late Bronze Age societies are less likely to be responsible for this recorded impact on natural environment due to their lower number (e.g. Ostoja-Zagórski 1982: 122-127; Łuka 1983: 10-18; Dzięgielewski 2005, Fig. 4-5). This violent increase in human indicators is followed by an equally fast decrease of pollen evidence of human activity, especially cultivated plants. It led, in the case of most profiles, to almost complete disappearance of human impact evidence (Fig. 3). It is worth mentioning that such a rhythm of changes does not characterise all regions of Poland, and the decrease of human economy indicators during the La Tène period is not as rapid as in Eastern Pomerania (compare e.g. Western Pomerania – Latałowa 1992, Fig. 26). In

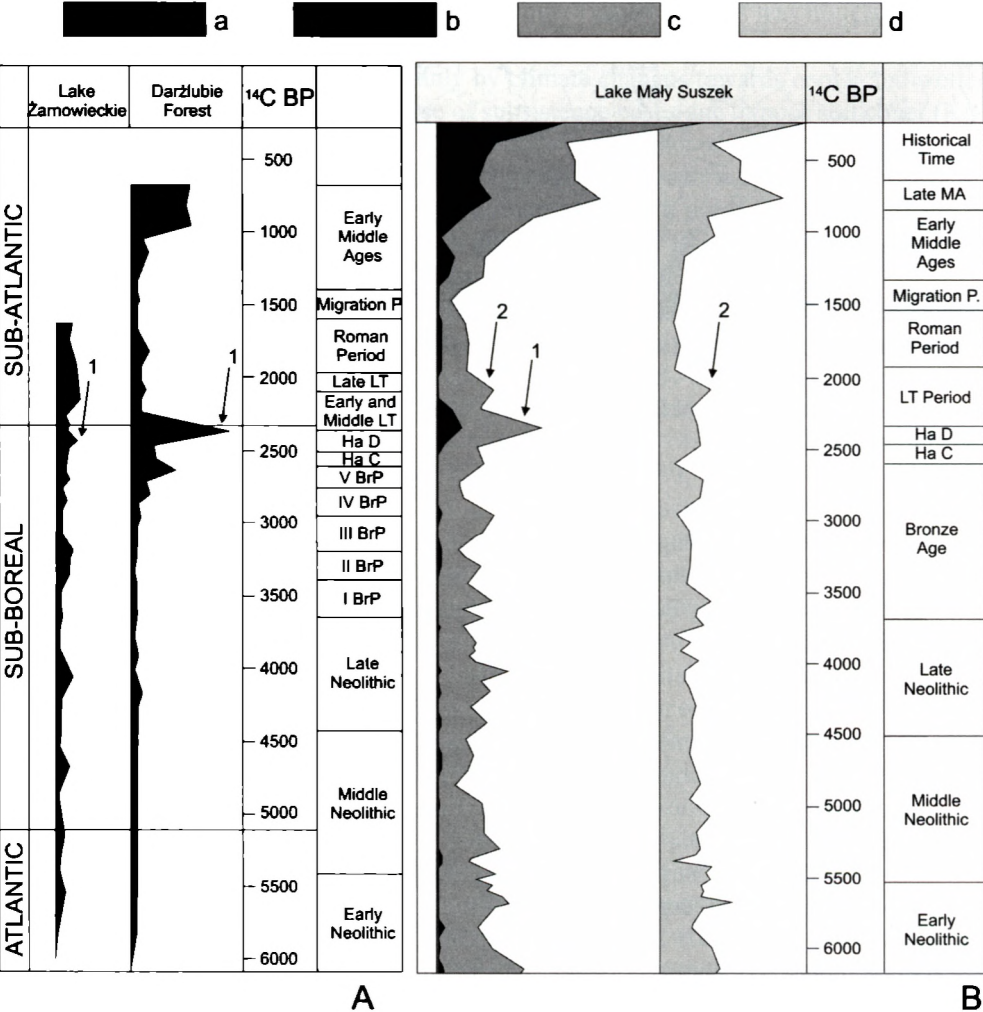


Fig. 3. Human impact indicators in chosen pollen diagrams from Pomerania: Lake Żarnowieckie; Darżlubie Forest; Lake Mały Suszek. a – general human impact; b – *Cerealia* (cereals); c – other groups of human impact indicators; d – *Gramineae* (grasses). 1, 2 – peaks discussed in the text. A – after Latałowa 1982, Fig. 11; B – after Miotk-Szpiganowicz 1992, Fig. 23 (correlation with archaeological periods after the original publications)

Little Poland, for instance, it is much weaker. A comparable decline in this territory may be linked only with the Migration Period (Nalepka 2003, Fig. 3).

The alleged decrease of Pomeranian population during early La Tène period should result in deep differences in settlement structures between the Pomeranian culture and the succeeding, well evidenced phase, connected with the Oksywie culture (younger Pre-Roman period). Indeed, re-colonisation of the area of eastern Pomerania is noticeable both at macro- and micro-regional level (Wołagiewicz 1979: 57; Dziegielewski 2005: 394, Fig. 9).

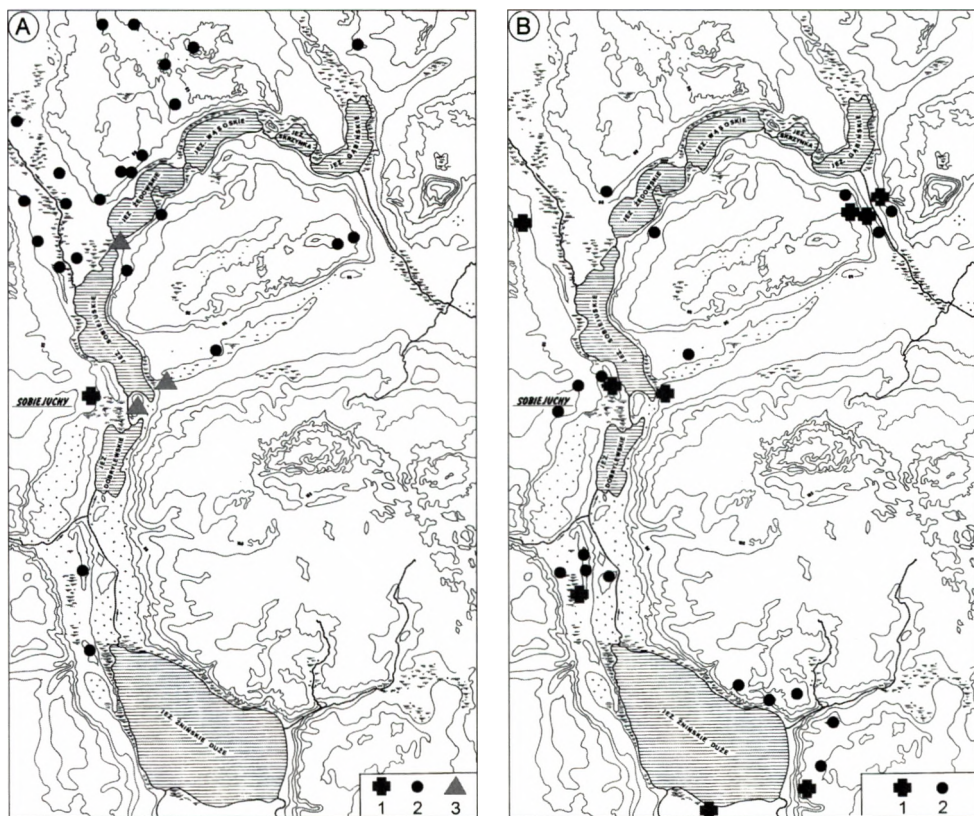


Fig. 4. The mesoregion of Sobiejućhy (Pałuki/Kujavia). A – distribution of late Lusitan culture sites (Hallstatt C – C/D period); B – distribution of Pomeranian culture sites (Hallstatt D – early La Tène period) (after Ostojka-Zagórski 1993). 1 – cemetery, 2 – settlement trace, 3 – settlement

Summarising, the following arguments can support the hypothesis about migration from Pomerania: 1) lack of well dated archaeological artefacts younger than early La Tène period in Pomerania; 2) strong or even drastic decline of human indicators in pollen diagrams in Pomerania following the period of increased human impact; 3) lack of traces of continuity between the Pomeranian and succeeding Oksywie culture; 4) simultaneous occurrence of cemeteries of the Pomeranian type in central Poland, Greater Poland, Silesia etc.; 5) distribution of settlement, which becomes sparser with the distance from Pomerania (Fig. 1). The last argument, obviously, could also be employed by a diffusionist approach.

ARGUMENTS FROM BEYOND POMERANIA

Assuming that people movement from Pomerania indeed took place, we may expect that settlement representing Pomerania type in new areas would resemble the patterns from the motherland territory. I will focus on these patterns instead of referring to the differences

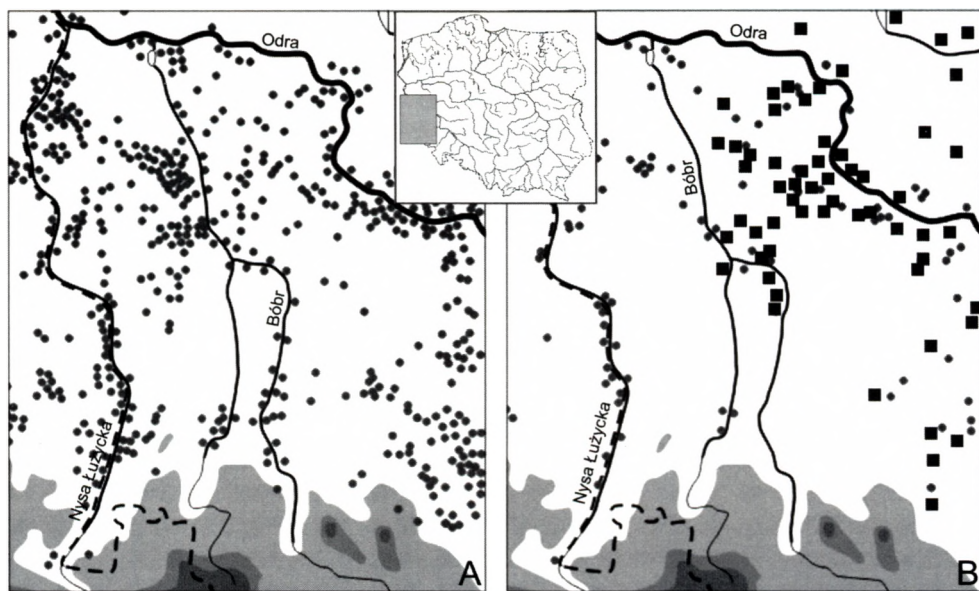


Fig. 5. The Bóbr River basin (between Nysa Łużycka river and Odra river). A – distribution of the late Lusatian culture sites (Hallstatt C period); B – distribution of the late Lusatian (dots) and Pomeranian culture (rectangles) sites (Hallstatt D – early La Tène period) (after Buck 1979; Mierzwiński 1994; Kaczmarek 1999; 2007)

in material culture between the earlier (the Lusatian) and later (the Pomeranian culture) phases of settlement beyond Pomerania. Such differences exist, as is best indicated by the fact that archaeologists distinguished two separate cultures (the Lusatian and Pomeranian). Unfortunately, there are not many case-studies for settlement structures of the Pomeranian culture outside the Pomerania. Situation recorded e.g. in the Kujavia region, in the surroundings of Sobiejuchy, clearly confirm deep differences between the old and new cultural phenomena in terms of the settlement structure (Ostoja-Zagórski 1993, Maps 2-3). In the Hallstatt period, the Lusatian societies inhabited a central, fortified settlement with a large cemetery, both located near to Lake Sobiejuskie shore (Fig. 4: A). During the late Hallstatt and early La Tène period traces of the Pomeranian culture dominated over the cultural landscape of the region. However, the pattern of their distribution was quite different from the Lusatian one – many small cemeteries (or even single chest-graves) were dispersed in different parts of the area and so were the remains of settlements (Fig. 4: B). It resembled the structures known from Pomerania (Wiącek 1972; Szymańska 1981, Fig. 6; Dziągiewski 2005). Thus, the changes in culture of the area in question included: material culture, burial customs, settlement structure and patterns of land use.

An interesting observation is provided by analysis of the south-western periphery of the Pomeranian culture. In the middle Oder basin, in the western part of Lower Silesia, we can notice dense settlement network of the Lusatian culture at the beginning of the Early Iron Age (Fig. 5: A) (Buck 1979: 144-145, Fig. 104; Mierzwiński 1994, maps 6-7). The situation changed during the Hallstatt D period when a decrease of the settlement is

observed. Simultaneously, at the end of that period, the first, quite abundant sites of the Pomeranian culture emerged, but they did not cross the Bóbr River (Fig. 5: B) (Pazda 1970; Kaczmarek 1999). Westwards to this river, the Białowice- (Billendorf-) group communities of the Lusatian culture continued their development. Therefore, a question arises about the nature of the 'Pomeranian' traits in south-western Poland. If their appearance had been of endogenous character among the Lusatian societies, as many authors claim (e.g. Hensel 1971; Malinowski 1989a), why these processes did not encompass terrains to the west from the Bóbr River? On the other hand, distinct differentiation of the south-western periphery of the Pomeranian culture in terms of material culture (e.g. burial pottery) (Gedl 1995), may testify that local elements were of great importance to the genesis of this cultural phenomena in the studied area (cf. Mierzwiński 1994: 122).

In southern Poland, settlements of the late Lusatian culture, representing many regional variants (groups), occupied both the territories of lowlands (Sandomierz Basin) and uplands (Małopolska Upland), as well as the Carpathian Foreland (Fig. 6). The Pomeranian culture, the oldest traces of which appeared in the area in question probably at the end of the Hallstatt Period (Nosek 1946; Grygiel et al. 2009; Dziegielewska, in press), avoided higher, elevated location. The Carpathian Foreland threshold, visible with the naked eye, as well as any terrain located over 300 meters above the sea level, were an insuperable barrier for communities of the culture in question, which prevented them from expanding further to the south. It may indicate that their model of culture was typical of lowlands and that they were not able to transform it after confrontation with a different geosystem (Dziegielewska, in press). Geographers and anthropologists underline that inhabiting sub-mountain territories is not only a question of different geomorphologic or economical conditions, but it is often a question of mentality of the inhabitants, who create different cultural landscape (Łanczont, Wojtanowicz 2005: 44). For those, who were accustomed to lowland landscape, the perspective of the upland occupation might constitute serious obstacle for further expansion.

As it might have become clear so far, some arguments from beyond Pomerania may also support the thesis, which assumes that new cultural phenomenon emerged as a result of some (limited?) movements of people. When rejecting the migration hypothesis one should assume unprecedented changes within Lusatian culture communities, encompassing almost all areas of life.

An additional, frequently quoted argument in favour of migration is that the entire range of the Pomeranian culture was characterized by unusually uniform material culture (e.g. Mierzwiński 1994: 122; Czopek 2005: 226), although there existed two main provinces (north-western and south-eastern), differing mainly by burial rituals (Malinowski 1989a; Węgrzynowicz 1995). On the contrary, the preceding Lusatian culture was significantly divided into many local groups differentiated e.g. by ceramic style. Similarities between the material remains (especially pottery) from northernmost and southernmost peripheries of Pomeranian culture are astonishing (Dziegielewska, in press). Such degree of uniformity seems hardly possible to be gained without a direct involvement of at least some representatives of given society on the acculturated area. Of course, I am far from the opinion that all of the traces ascribed to the Pomeranian culture outside Pomerania are remains of migrants from this limited area, but to some extent, they must have been. This question will be further explored in a more detailed way.

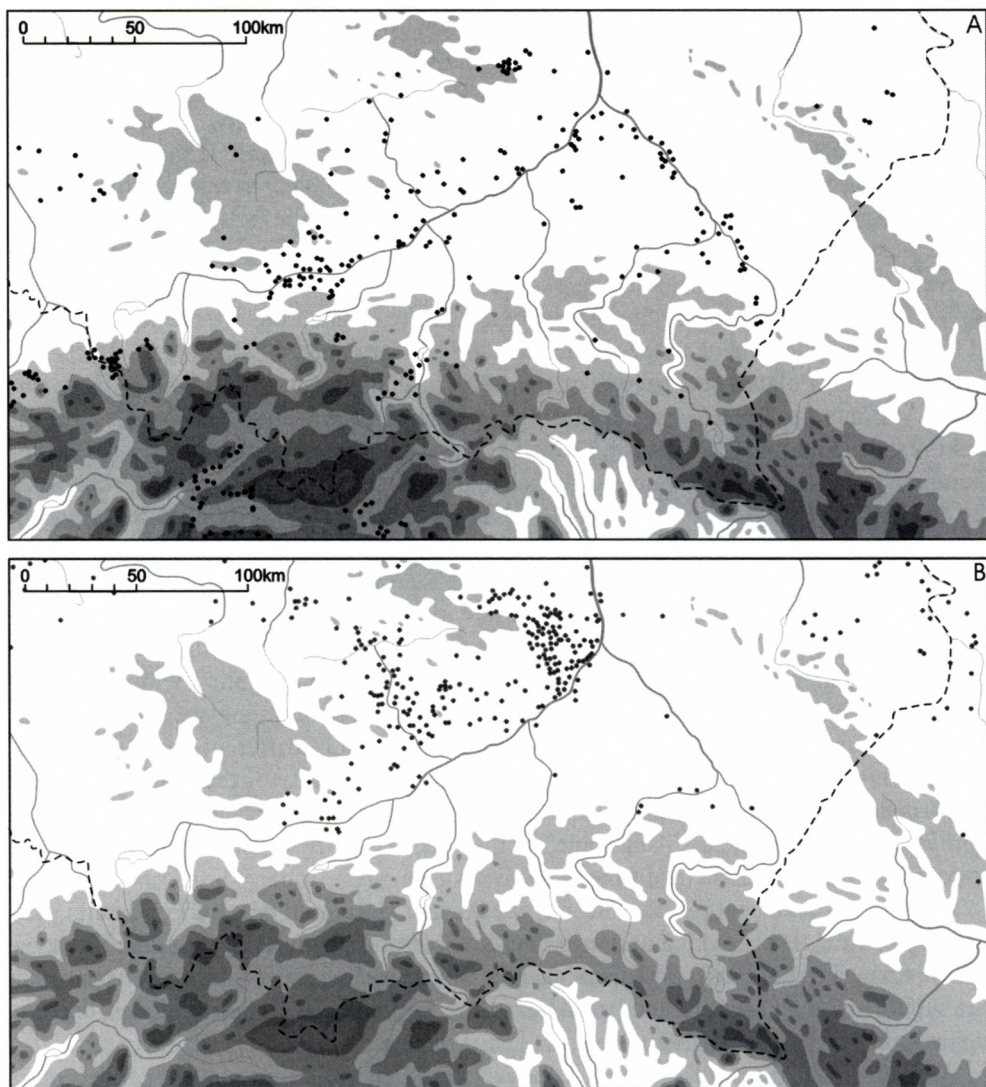


Fig. 6. Southern part of Poland (Little Poland and part of Upper Silesia). A – distribution of sites of the late phase of Lusatian culture (Hallstatt C/D, Hallstatt D; early La Tène?); B – distribution of Pomeranian culture sites (late Hallstatt D – early La Tène) (after Dzięgielewski, in press)

POSSIBLE REASONS FOR MIGRATION

Many authors claim that seeking possible causes of prehistoric migration is hopeless (Burmeister 2000; Prien 2005). On the other hand, we are forced to determine possible reasons when trying to use classical paradigm of “push-pull factors” according to Everett Lee (cf. Anthony 1990; Prien 2005; Przybyła, in this volume). Probably the most

accurate opinion concerning a potential of archaeology in this matter was expressed by David W. Anthony: ‘...*proximate causes of prehistoric migrations are probably lost forever – we can only hope to identify structural conditions that made migration more or less likely to occur...*’ (Anthony 1992: 174). Now, let me focus on possible structural conditions that might have enabled increased mobility in the studied area at the transition of the Bronze and Iron Age.

The development of Pomeranian societies as reflected by climate changes

Climate change was quoted as one of the main reasons for the Pomeranian culture expansion (e.g. Tackenberg 1926: 154; Łuka 1965: 52-54; Czopek 2005: 225; Chochorowski 2005: 495-497). Cooling and wetting of climate were, however, treated rather like a slogan. The improvement of calendar time-scales for both: the Holocene climate changes and the chronology of the Hallstatt period enabled, in recent years, analyses of their mutual relation in a more detailed way. The beginning of climatic changes is currently correlated with the phase of a sudden and sharp decrease of solar activity, which probably resulted in the increase of radiocarbon concentration in the atmosphere, which began at about 850 cal BC (van Geel et al. 1996; van Geel et al. 1998; Maise 1998: 219-220; Speranza et al. 2002; van Geel et al. 2004: 152-153). In northern Europe climate changed towards more oceanic type and lake levels started to rise. On the other hand, indications derived from dendrochronologically dated archaeological contexts, confirm that the beginnings of the Hallstatt C period should be placed shortly after this date (Friedrich, Hennig 1995; Trachsel 2004: 151). The unfavourable climatic tendency changed after about 100 years (Maise 1998: 220, Fig. 22). A significant change towards better (warmer) conditions at about 650 BC was evidenced e.g. by dendroclimatology (Tinner et al. 2003: 1456, Fig. 5B), but it was not recorded in mid-European lake-levels fluctuations (Magny 2004). This phase should be most likely connected with the beginnings of the Hallstatt D period (cf. Trachsel 2004: 152). The next cooler oscillation, although not as violent as the previous one, took place at about 450 BC (Maise 1998: 220).

The synchronisation of cultural development in the studied area with the above-mentioned climate changes might be as follows (Fig. 7): a shift from the Lusatian, economically and culturally stable model towards a new, less conservative one, coincided with a phase of rapid cooling. To some extent, cultural transformations could have been accelerated by climate changes. However, the economic model of the Wielka Wieś phase was hardly different from that of the preceding Lusatian culture. During the Hallstatt C period, the settlement of the Wielka Wieś phase did not exceed the boundaries of Pomerania (Podgórski 1992, Fig. 10; Kaczmarek 2005: 160). It seems unreasonable to suspect any larger people movements in regard to this period (for the discussion see: van den Boom 1980/1981: 225-226; Podgórski 1992: 208-209; Pietrzak, Podgórski 2005: 29; Malinowski 2007: 13). The first well-dated assemblages of the Pomeranian type outside the Pomerania are not recorded before the middle of the Hallstatt D period (Malinowski 1989a: 572; Kaczmarek 2005; Muzolf, Lorkiewicz 2005: 208-210). Therefore, the expansion could have started not earlier than in the middle of a warmer oscillation (that

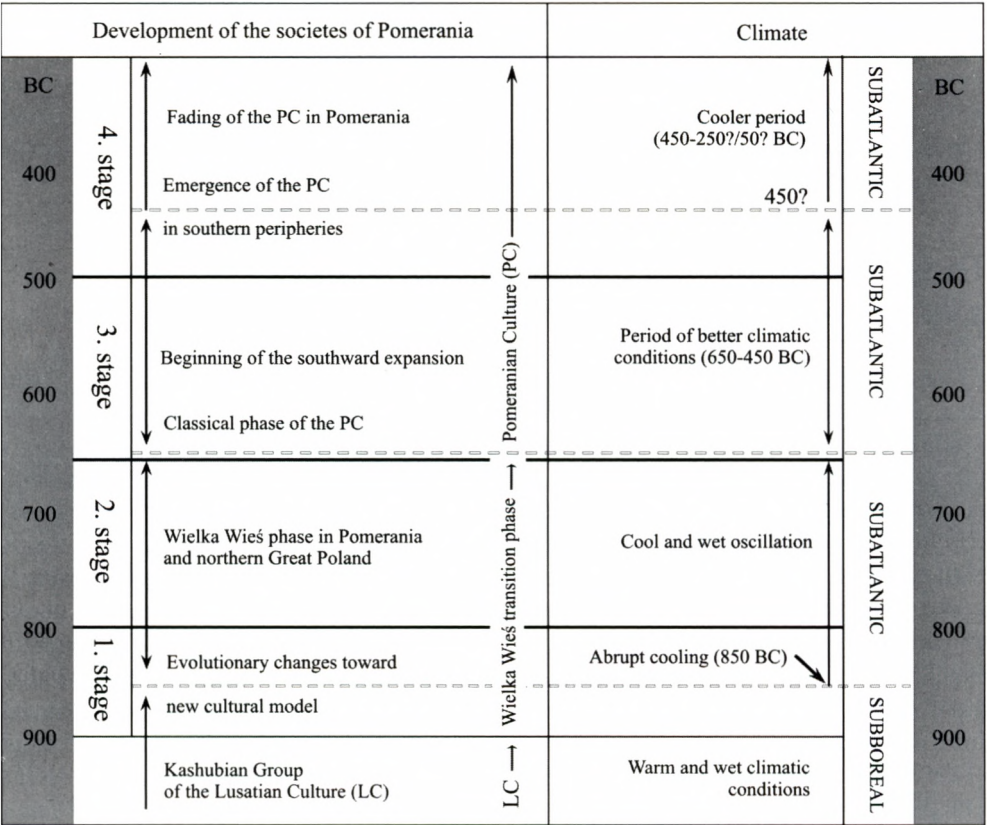


Fig. 7. Correlation between the stages of cultural development of Pomerania during Early Iron Age and phases of Late Holocene climate (climatic data after Maise 1998; Tinner et al. 2003; van Geel et al. 2004)

emerged gradually from ca 750 BC, but especially after 650 BC – Maise 1998; Tinner et al. 2003), and must have continued until its end. Before the next deterioration of climate took place at about 450 BC, the traits connected with the Pomeranian culture had spread almost over its entire range (Fig. 1).

The deterioration of climate cannot be considered a reason of the Pomeranian culture migration in the classic phase as this latter event is much later than the first. Of course, one should not exclude the role of short-term climatic events, such as one or more years of “bad crops”, which – by hitting the economic basis of farming community – might cause far reaching consequences. However, this situation refers to any segment of prehistory.

Nevertheless, as the chronological chart (Fig. 7) suggests, we should rather consider a possibility that climate changes were responsible for creating conditions which enabled the emergence of the Wielka Wieś phase. However, taking into account that cultural traits such as burial customs, ceramic styles, and first of all – settlement preferences were not substantially altered, it is difficult to prove that they caused this cultural change. Arguments derived

from settlement geography did not confirm the thesis of fundamental changes in eastern Pomerania at the turn of the Bronze and Early Iron Age (Szymańska 1981; Dziągiewski 2005). Settlement network became more dense, but remained essentially unchanged. In my opinion, in this case we should rather take into account long-distance contacts manifested e.g. by the occurrence of house urns (Sabatini 2007) and evidences of amber trade (Bukowski 2002: 109-110). It is worth mentioning that other groups of the western part of the Lusatian cultural circle were also changing at the beginning of Hallstatt C period due to factors other than climatic (cf. Chochorowski 2005: 493; Gediga 2008).

Other aspects of alleged migration

As it was mentioned above, the southward expansion of the Pomeranian culture took place as early as middle/end of Hallstatt period. Therefore, the next cooler climate oscillation, which began at about 450 BC, could not have been responsible for depopulation of Pomerania during the La Tène period. We should try to find other possible reasons. An old hypothesis of Józef Kostrzewski (1946), in which overpopulation of Pomerania was assumed, was based on high density of Pomeranian culture sites, especially in eastern Pomerania (Łuka 1979). Such view may find a surprising confirmation in pollen spectra. Unprecedentedly high values of human activity indicators in many pollen profiles from Pomerania coincided with significant destruction of forests observed in the same profiles (Latałowa 1982; 1997; 2007; Miotk-Szpiganowicz 1992), which seems to suggest an unparalleled increase in local population in the Early Iron Age (Fig. 3: 1). In sediments of Lake Gościąg, southwards to Pomerania, the peaks of human indicators for the period in question are significantly lower (Ralska-Jasiewiczowa, van Geel 1998, Fig. 9.17). It corresponds with far scarcer archaeological evidence of the Pomeranian culture in this area (Pelisiak, Rybicka 1998: 264, Fig. 9.5).

Unfortunately, estimations of Pomeranian population, performed by J. Ostoj-Zagórski (1982), seem not very accurate at the moment, mainly due to problems with chronology of specific sites as well as small number of anthropological examinations (only less than 10% of known cemeteries were analysed). Newer, more complex studies – both archaeological and anthropological – show that local populations must have been underestimated in previous attempts. As it is suggested by recent monographs of the Pomeranian culture cemeteries (e.g. Fudziński, Rożnowski 1997; 2002; Fudziński, Gładykowska-Rzeczycka 2000; Kuczkowski 2001), the average number of graves in cemeteries of the Pomeranian culture in Pomerania was probably larger than it was presumed earlier. Taking this into consideration, together with the revised chronology of the culture in question (especially the fact that many sites considered as the early La Tène are suggested to be dated within classic phase – Hallstatt D – Podgórski 1992), we can assume a rapid increase in Pomeranian population at the turn of the Bronze and Early Iron Age. A drastic decline occurred during the early La Tène period. The first of the above population changes cannot be easily explained as yet. Demographic laws do not foresee such growth of any population (especially prehistoric one) without significant changes in economical conditions, but we have not identified them at the Lusatian/Wielka Wieś phase transition. Some indices of general economic changes were

recorded, however, at the transition from the Wielka Wieś phase to the Pomeranian culture. I will discuss these changes later in text, although I do not consider them as the sole reason of population fluctuations. Explanation of the 'unnatural' population growth may be connected, to some extent, with our problems with chronology of the analysed period. As for the succeeding decline of the Pomeranian population, it may be explained (at least partially) by migration.

The above-mentioned socio-economical changes are evidenced by the decline of stable, long-occupied settlements in Pomerania during so-called classic phase of the Pomeranian culture (Hallstatt D period). The youngest big settlements, typical of stable, 'Urnfield' societies, are to be linked with the Wielka Wieś phase (e.g. Podgórski 1972; Informator Archeologiczny 1977: 91-92; 1984: 104-106; Kwapiński, Ruta 2003). Until recently, archaeologists could not be sure if this lack of settlements did not stem from the state of research. However, it has found its confirmation in the results of the excavations preceding construction of the motorway A1, which intersects Pomerania (e.g. Paner et al. 2003, Fig. 1). During these and other rescue excavations in Pomerania, only few settlements of the examined culture were found (e.g. Świątosławski et al. 1999; Bednarczyk 2003; Fudziński et al. 2005). All of them were relatively small and yielded few remains (both mobile and immobile), contrary to settlements of the Lusatian culture or Wielka Wieś phase.

Moreover, pollen evidence indicates, that the phase of significant increase in human economic activities, documented especially by the rise of cereals and destruction of forests (Latałowa 1997), was followed by the period when pollen of the cultivated plants dropped to minimum values. The presence of human groups was indicated, at least in some pollen diagrams, by high values of ruderals and plants of various grassland type, which may suggest more pastoral economy (Latałowa 1982; Ralska-Jasiewiczowa, van Geel 1998). Only after this period a total decrease of human impact factors took place. However, we should once again underline that the precise, absolute dating of the above-mentioned palaeoecological facts is hardly possible. Due to low resolution of the analysed pollen spectra, we are not able to prove that, in specific profiles, the peaks of agriculture indicators always correspond to the late Lusatian and Wielka Wieś phases, and the increased values of husbandry indicators are always to be connected with the Pomeranian culture. The examination of this question is a task for future, multidisciplinary (archeological and palaeoecological) research in micro-regional scale.

The mobility of the Pomeranian societies may be inferred from increasing role of the horse in symbolic practices, especially in burial customs. The Pomeranian communities started to treat this animal in a special way – like many nomadic tribes. Incised images of a horse on urns are spread mainly in Pomerania (Kwapiński 1995), whereas the distribution of burials, containing – besides human – also burnt horse bones, follows a completely different pattern (Ablamowicz 2005, Fig. 1). Such burials are spread along the routes of supposed migration (Fig. 8). It may indicate time and place when the horse gained such an important position that it became part of the sacral (funeral) sphere. In this context, use of carts among the societies in question is worth mentioning, although these heavy vehicles had probably never been used for longer distances (Kwapiński 1993; Harding 2000: 167). A question of short-distance mobility of a given society becomes crucial when considering possible migration, because it is well documented by anthropology that more mobile communities are more likely to generate migrations (e.g. Anthony 1990: 905).

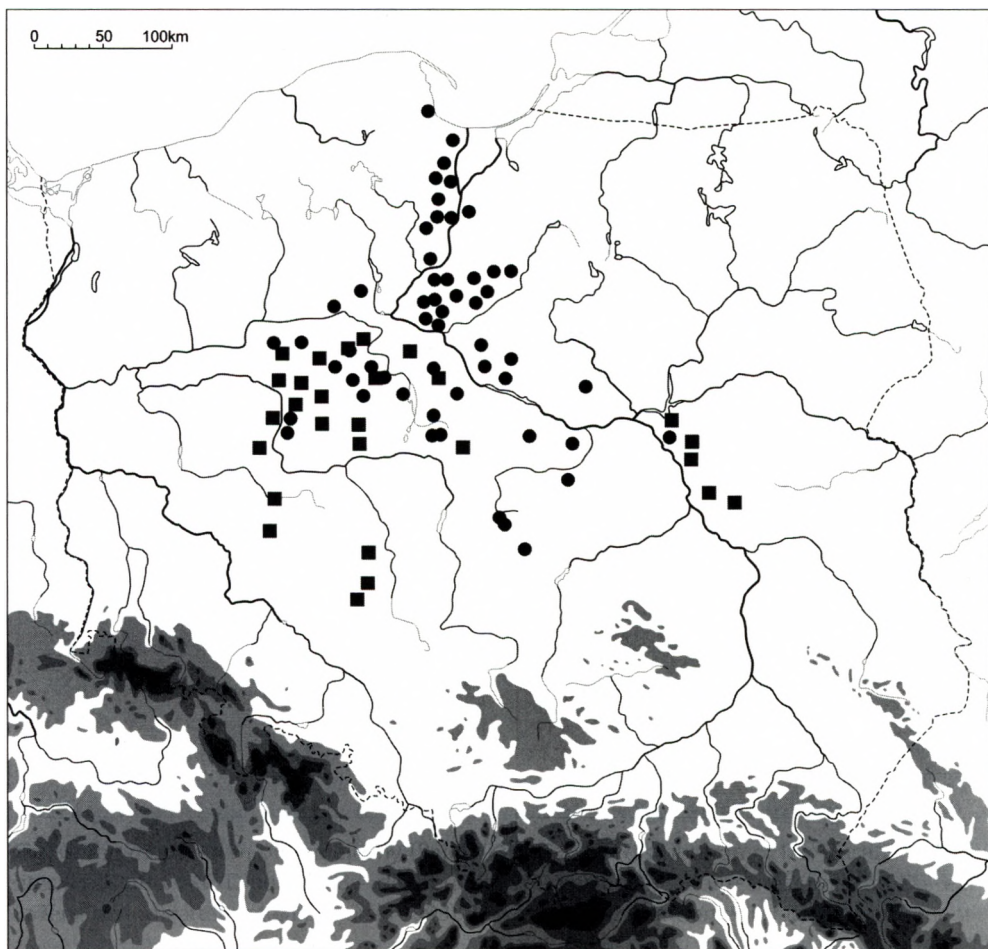


Fig. 8. Distribution of collective chest graves (containing more than 15 cinerary urns) (dots) and graves with horse cremains (animal, human/animal or human-with-horse-bone-admixture) (rectangles) in Pomeranian culture (after Malinowski 1969; Muzolf, Lorkiewicz 2005; updated by author; Abłamowicz 2005)

Simultaneously with a shift of economic bases of the Pomeranian communities, deeply reaching changes of social structure took place. They are reflected by replacing single burials, typical of the Lusatian culture and the Wielka Wieś phase by chest graves, containing from several to over 100 cinerary urns, interpreted as family or clan burials (Malinowski 1969: 47-58). In common opinion of archaeologists, this indicates the increasing role of a single family. The total disintegration of other social links, presumed especially in older literature, seems unlikely. It was derived from the false observation that cemeteries of the classic stage of the Pomeranian culture were significantly smaller than those from previous period (the Wielka Wieś phase) and represented burial places of only one clan. However, as it has already been mentioned, newer field

data do not confirm this assumption (e.g. Fudziński, Rożnowski 1997; 2002; Fudziński, Gładykowska-Rzeczycka 2000; Kuczkowski 2001). A role of the family apparently increased but it still functioned within broader social frames.

Based on cemetery studies, we can suppose that the decision about migration was taken at a family, or rather a clan, level. Separate families could consolidate into broader units in order to ensure a success in reaching the destination area. Such a possibility is suggested by the distribution of the largest chest-graves in Polish lowland (representing large kin level?), which may coincide with the main routes of alleged migration (Malinowski 1969, maps 11, 13; Muzolf, Lorkiewicz 2005, Fig. 6) (Fig. 8). If making the decision of leaving homeland was taken on a family or clan level (what seems common for most prehistoric societies), then the observed “wavy” or “fluent” influx of the Pomeranian culture sites on the Polish lowland becomes easier to understand. Probably another well-known mechanism of migration played a significant role in this case, which means the presence of relatives in the destination area. It might have stimulated further families to follow (Anthony 1990: 903).

In the destination area, burial customs seem to be the most durable element (cf. Burmeister 2000; Prien 2005), whilst economical strategies began to change towards more stable, agricultural ones. It is an interesting feature of the Pomeranian culture settlements outside the Pomerania that they started to resemble typical settlements of the Lusatian complex (e.g. Muzolf 2002). Such a situation, in which those who have migrated are able to fit their economical patterns to new conditions, is confirmed by sociology. It took place in case of nearly all historical migrations (e.g. Anthony 2007: 113). It is a crucial observation since it can indicate one of possible goals of migration: economic stabilisation as one of pull factors.

In many areas of Polish lowland and upland (Little Poland, Central Poland, Lower Silesia) it is possible to distinguish at least two types of sites or assemblages: the first are characterised by direct accordance with the Pomeranian culture type and the second are of ‘mixed’ (Lusatian/Pomeranian) character (e.g. Poleska 2006: 26-33; Muzolf 2002; Andrzejowska 2005; Szamałek 2006). They may reflect complex local relations, resulting from older and new-coming cultural elements. Besides, we should remember that different regional variants of the Pomeranian culture (Fig. 1) were shaped – on one hand – by differentiated Lusatian background (regional groups), and on the other hand, by various external influences (e.g. Petersen 1929; Nikitina 1965; Czopek 1992; Gedl 1995). The formation of the Pomeranian cultural model in the areas beyond Pomerania was a long-term process. During that time, local societies characterised by Pomeranian model naturally maintained external contacts. These phenomena are far from being explained and exceed the range of current study.

CONCLUSIONS

In this review, I was trying to present indices suggesting that in the late phase of the Early Iron Age (Hallstatt D period) migration could have taken place from Pomerania southwards. The destination territories were in some regions settled by communities of the late Lusatian culture, while the rest was unoccupied (due to the general decline of

the Lusatian population during Hallstatt D period). The flow of information between Pomerania and southern territories, which is essential for migration, is evidenced during the Bronze Age and Early Iron Age, among other things, by the presence of long-distance trade routes (Bukowski 1993; 1998; Łuka 1985).

General conditions for migration were generated by the fact that the Pomeranian societies turned towards less stable, extensive subsistence strategy. It led, at the beginning, to rapid demographic increase, but during the Hallstatt D / early La Tène period, it resulted in the local over-exploitation of natural environment (e.g. destruction of forests – Latałowa 1982; 1997). There are some substantial difficulties in determining direct 'push' and 'pull' factors, but it seems that the main cause for migration at the level of a specific family or kin might be connected with local economic decline and lack of access to agricultural products (cf. Kadrow 1995: 126; Renfrew 2001: 180-181; Czopek 2005: 225-226). Another important factor might result from social changes – we cannot exclude that mobility was the only way for specific members of the society to gain a desired social status. Therefore, social competition might have catalysed migratory tendencies (cf. Anthony 1997: 22-23; 2007: 110-111).

In my opinion, in the studied case, both the supporters and opponents of the migration scenario are partially right, just like in the famous dispute on Anglo-Saxon migration to England (Härke 1998: 19). Indeed, it is hardly possible that either the whole population left Pomerania, or all traits in central, eastern or southern Poland, identified by archaeologists as 'Pomeranian', were the remains of migrants from a limited region in the north. The processes were unquestionably more complex, embracing such phenomena as acculturation. However, all the recollected arguments speak for the thesis that cultural changes towards 'Pomeranian' model among the late Lusatian societies were catalysed in the whole range of the Pomeranian culture by physical presence of bearers of this culture. The number of those migrants and their direct provenance in specific areas remain undetectable, but it is reasonable to assume that the further from Pomerania, the less numerous they were. Some regions, however, which probably offered better conditions, might have become secondary centres of redistribution of cultural traits (Fig. 1).

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